

EXHIBIT A



Bringing Nanoscience to Life

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NanoBio® Protect Nasal Antiseptic Solution



NanoBio[®]Protect

NanoBio® Protect is an alcohol-free nasal antiseptic solution that can be used to help reduce germs on skin that can cause infections. The product is easy to apply with any cotton swab for use on the skin around the rim of your nose as well as the skin up to one-half inch inside each nostril. It is non-irritating, fragrance-free and leaves no residue after application.

NanoBio® Protect is an FDA regulated over-the-counter skin antiseptic that incorporates the active ingredient benzalkonium chloride (BZK), which has been used in humans as a topical skin antiseptic since the 1940's. NanoBio®

Protect is similar in concept to a hand sanitizer but is designed for use on the skin inside and around the nose where germs frequently enter the body.

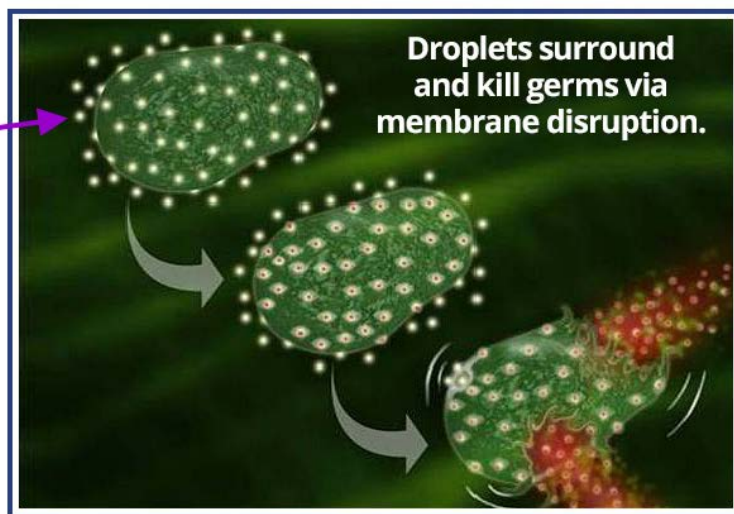
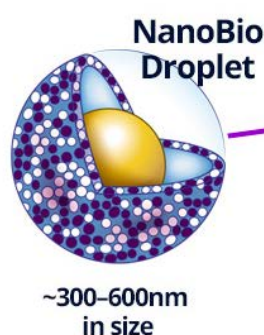


The unique effectiveness of NanoBio® Protect is derived from BlueWillow's patented nanotechnology.

NanoBio® Protect places the BZK antiseptic on the surface of nano-droplets, which results in at least four key advantages:

1. The nano-droplets are attracted to germs by electro-kinetic charge and present the BZK in such a way to enable killing of germs on contact,
2. The droplets persist on skin for 4 or more hours, enabling long-lasting effectiveness,
3. The droplets significantly hydrate skin to avoid dryness and cracking that can allow germs in.
4. And lastly, when bound to nano-droplets, BZK is non-irritating to the skin.

NanoBio® Protect kills germs via membrane disruption. NanoBio® Protect is comprised of positively charged droplets that are 300–600nm in size. The droplets are attracted to negatively charged germs in the skin. As shown to the right, the nano-droplets



physically disrupt the outer membrane of germs, killing on contact.

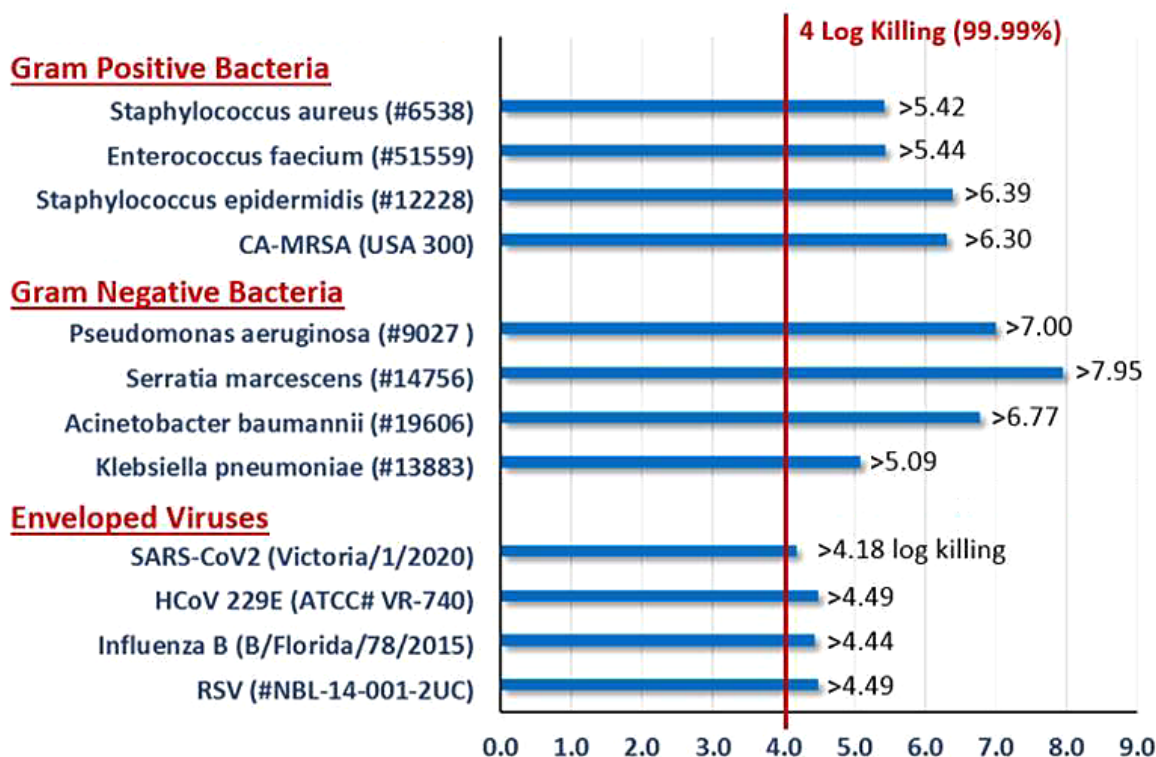
NanoBio® Protect is applied by thoroughly swabbing the skin up to one-half inch inside of each nostril and is recommended for use to help reduce germs on the skin in and around the nose that can cause infections. It should be used in conjunction with frequent handwashing, limited touching of the face, and social distancing to help minimize infection. Each 0.75 oz bottle of NanoBio® Protect will provide 40 or more treatments. A single application should involve the use of two swabs, including one for each nostril, or the use of a double-sided swab.

The product can be applied to the skin every 4–8 hours as needed, and is recommended for use during periods of increased risk of exposure to germs. For example, a healthcare worker might apply NanoBio® Protect two or more times a day. A flight attendant might apply the product 1–2 times during a long flight. Whereas, someone that is mostly staying at home in isolation may only need to apply it once a day or every few days prior to heading to the store or to an appointment.

Scientific Research Behind NanoBio® Protect

BlueWillow's
nasal
antiseptic

has not
been
clinically
tested to
confirm
protection
against
COVID-19
infection in
humans. It
has



demonstrated both anti-bacterial and anti-viral activity in laboratory tests making it a potentially important additive measure to reduce the risk of infection

Standard *in vitro* lab experiments demonstrate that NanoBio® Protect kills more than 99.99% of germs within 60 seconds of exposure, as shown in the graph to the right.

Recent studies conducted by Public Health England also demonstrate NanoBio® Protect's ability to kill COVID-19 virus in laboratory tests. However, as stated above, studies to test for protection in humans have not yet been performed.

In addition, *ex vivo* tests in human skin (Figure A below) demonstrate that NanoBio® Protect persists on skin up to 7x better than commercial products and aqueous solutions containing the same BZK antiseptic agent. In vivo studies conducted in human volunteers (Figure B below) demonstrate that a single application of NanoBio® Protect significantly increases skin hydration for at least 3 hours, as compared to common hand sanitizer products:

Figure A

Ex vivo levels of BZK ($\mu\text{g/g}$ tissue) in human abdominal skin following one application
(dose of $100\ \mu\text{l}/\text{cm}^2$, measured at 24 hours)

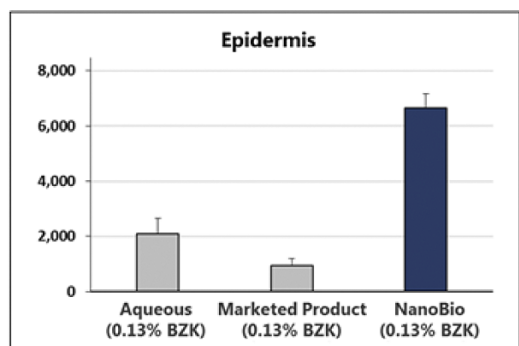
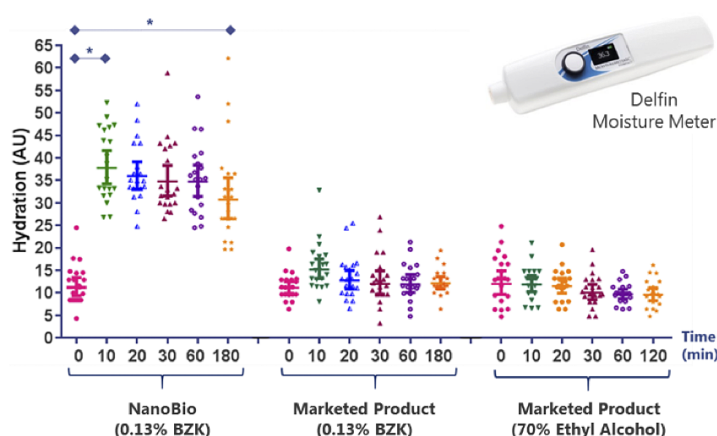


Figure B

Measured following 1mL application to the arms of human volunteers



Safety

NanoBio® Protect and similar NanoBio® formulations have been tested extensively in animal and human studies involving topical application to skin. These studies demonstrate that topical NanoBio® products are non-irritating and are not absorbed systemically. The products are alcohol-free and are comprised of nanodroplets that have been optimized to provide significant advantages when used as topical antiseptic products, without being absorbed through the skin and into the bloodstream.

NanoBio® Protect's active ingredient is 0.13% benzalkonium chloride, which is regulated by the FDA as a skin antiseptic and has been used in humans for over 75 years. Unlike alcohol-based products, NanoBio® Protect does not irritate or dry out the skin, and instead provides a moisturizing and comforting experience. The product should be applied with any cotton swab to the skin around the nose and up to one-half inch inside of each nostril where germs frequently enter the body.

Peer-Reviewed Scientific Publications

Other scientific publications describe the extensive research conducted with topical NanoBio formulations, as listed below:

- *"A Nanoemulsion as an Effective Treatment Against Human Pathogenic Fungi". Therapeutics and Prevention. 2019, Nov/Dec 4:6*
- *"Screening of Nanoemulsion Formulations and Identification of NB-201 as an Effective Topical Antimicrobial for Staphylococcus aureus in a Mouse Model of Infected Wounds". Military Medicine. 2016, May: 181, 5S:259-264*
- *"Nanoemulsion Therapy for Burn Wounds Is Effective as a Topical Antimicrobial Against Gram-Negative and Gram-Positive Bacteria". Burn Care Res. 2016, March /April: 37(2); 104-114*
- *"Treatment With a Novel Topical Nanoemulsion (NB-001) Speeds Time to Healing of Recurrent Cold Sores". Drugs Dermatol. 2012 Aug; 11(8):970-7*
- *"In Vitro Antibacterial Activity of NB-003 against Propionibacterium acnes". Antimicrobial Agents And Chemotherapy, Sept. 2011, Vol. 55, No. 9, p. 4211–4217*
- *"Topical Nanoemulsion Therapy Reduces Bacterial Wound Infection And Inflammation After Burn Injury". Surgery. 2010*
- *"NB-002, A Novel Nanoemulsion With Broad Antifungal Activity Against Dermatophytes, Other Filamentous Fungi, And Candida Albicans". Antimicrobial Agents And Chemotherapy, Aug. 2009, Vol. 53, No. 8, p. 3273–3279*
- *"In Vitro Activities of a Novel Nanoemulsion against Burkholderia and Other Multidrug-Resistant Cystic Fibrosis-Associated Bacterial Species". Antimicrobial Agents And Chemotherapy, Jan. 2009, Vol. 53, No. 1, p. 249–255*
- *"The Fungicidal Activity Of Novel Nanoemulsion (X8W60PC) Against Clinically Important Yeast And Filamentous Fungi". Mycopathologia 155: 195–201, 2001*
- *"A Novel Surfactant Nanoemulsion With A Unique Non-Irritant Topical Antimicrobial Activity Against Bacteria, Enveloped Viruses And Fungi". Microbiol. Res. (2001) 156, 1-7*
- *"Inactivation Of Ebola Virus With A Surfactant Nanoemulsion". Acta Tropica 87 (2003) 315/320*
- *"Antimicrobial Mechanism Of Action Of Surfactant Lipid Preparations In Enteric Gram-Negative Bacilli". Journal of Applied Microbiology 2000, 89, 397-403*
- *"Prevention of Murine Influenza A Virus Pneumonitis by Surfactant Nano-emulsions". Antiviral Chemistry & Chemotherapy, 2000, 11:41-49*
- *"A Novel Surfactant Nanoemulsion with Broad-Spectrum Sporicidal Activity Against Bacillus Species". The Journal of Infectious Diseases, 1999, 180:1939–49*

BlueWillow Biologics

2311 Green Road | Ann Arbor, Michigan 48105

Telephone: 734-302-4000 | Fax: 734-302-9150

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Protect

About ▼

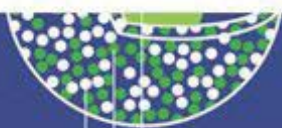
How it Works

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BUY NOW



Oil

Benzalkonium chloride

Non-ionic surfactant

**Learn more about
NanoBio Protect**

NanoBio® Protect uses proprietary nanotechnology to deliver a common skin antiseptic in a new way. [Learn more about the research behind NanoBio Protect](#)

How is nanotechnology used in NanoBio Protect?

NanoBio Protect works because of its patented nano-formulation. The product's unique, oil-based nanodroplets enhance the antiseptic's antimicrobial activity, optimizing its ability to kill germs on the skin. The nanodroplets are small enough to be effective on the skin, but too large to be absorbed into the bloodstream — creating a layer of lasting protection.

NanoBio Protect adds BZK antiseptic to the surface of nanodroplets. This technology offers four distinct advantages over conventional BZK antiseptics:

- The Nanodroplets optimize the ability of the antiseptic to kill germs.
- The droplets sit on skin after application, enabling protection for up to 8 hours (in lab testing).
- Dry skin allows germs to penetrate. Nanodroplets hydrate the skin, preventing dryness and cracking.
- When bound to the oil-based Nanodroplets, the antiseptic does not irritate the skin.

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Can you provide more detail on how the nano-technology works?



NanoBio Protect is composed of positively-charged droplets that are 300-600nm in size. These droplets are attracted to negatively-charged germs on the skin. The nanodroplets deliver the antiseptic BZK to the surface of the germs where the germ is inactivated via membrane disruption.

Other conventional BZK antiseptics often combine BZK with water, causing crystallization. When crystallization occurs, it rapidly inactivates the antiseptic and can lead to skin irritation. But because each NanoBio Protect droplet carries a positive charge, the droplets repel each other — keeping the BZK molecules separated and preventing crystallization.

Is nano-technology as used in this product safe?



NanoBio® Protect uses proprietary nanotechnology to deliver a common skin antiseptic in a new way.



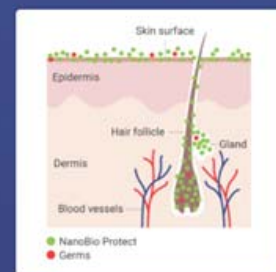
Effectiveness

The nanodroplets are optimized for size and charge in order to maximize their germ-killing impact. The positively-charged droplets deliver the antiseptic to the negatively-charged germs on the skin, inactivating them via membrane disruption.



Duration

NanoBio Protect's nanodroplets are positively charged, enabling them to stay active on the surface of the skin for significantly longer than common water-based BZK antiseptic solutions.



Safety

NanoBio Protect's nanodroplets are small enough to reach germs that hide in the deep layers of skin, but big enough to prevent absorption through the skin into the bloodstream.